

Section 9

Program Evaluation

9.1 Purpose

The permittees are required to evaluate the implementation of MSWMP activities on a periodic basis. Such an evaluation allows the permittees to take stock of their program and to modify it, as needed, as part of their ongoing effort to reduce pollutants in stormwater to the MEP and meet regional TMDL implementation requirements. This section describes the program evaluation activities that are carried out annually or will be carried out to support compliance with known TMDL requirements. As additional TMDLs are implemented in the region, program evaluation activities may be modified to address any additional requirements.

9.2 Program Evaluation Activities

Program evaluation elements consist of data collection and reporting using both direct and indirect monitoring methods. Direct water quality (conventional) monitoring is important because it can provide data that demonstrates whether receiving waters are meeting water quality objectives. This is particularly important for waters identified as impaired or waters for which a TMDL has been established. Indirect (non-conventional) monitoring provides a means to evaluate status or level of effort achieved on the implementation of permit requirements and specific program elements, for example, BMPs, training or public education. The following sections identify the indirect monitoring elements contained in the MSWMP that may be evaluated. The proposed direct monitoring program is described in Section 10.

9.2.1 Measuring Program Effectiveness

Measuring program effectiveness using indirect measures continues to be a challenge for any stormwater program. Often many of the indirect measures (for example, numbers of inspections, number of Notices of Corrections) provide little to no information on whether or not water quality has been improved or at least not degraded. These indirect measures of success typically fall into one of the following four areas:

- *Permit Requirements* – Measure of the degree of success in implementing specific time-sensitive permit elements, for example the completion of studies, and preparation of workplans.
- *Management Milestones* – Quantitative measures of implemented stormwater management activities, for example, the number of inspections, number of spills responded to, or the number of brochures mailed out.
- *Pollutant Loads Avoided* – Quantitative measures of pollutants removed and thus eliminated from having the potential to be flushed into receiving waters, for example the number of pounds of sediment removed from catch basins or the number of pounds of debris removed from streets.

- *Public Behavior* – Use of public surveys to measure changing public sentiments.

Currently, the mechanisms are in place to measure all of these areas. However, with the exception of the area addressing pollutant loads avoided, it is difficult to link most measures to actual improvements in water quality.

With the stormwater program moving away from a process-based program to an outcome-based program, the annual program evaluation would benefit from focusing more on direct measures of improvements in water quality rather than status reports for each program area. To that end, the permittees propose to reduce or eliminate reports or reporting elements that do not serve the essential purpose of improving stormwater quality.

9.2.2 Data Management

9.2.2.1 MS4 Solution

Individual permittees are responsible for monitoring and evaluating the adequacy of their respective stormwater programs. In addition, permittee-submitted data, which are analyzed and assembled into reports by the Principal Permittee, are used by the Management Committee to monitor and evaluate the adequacy of area-wide program implementation.

To facilitate a unified approach for documenting and reporting stormwater program information, the Management Committee has developed an MS4 Data Management System (“MS4 Solution”) for the County MS4 Permit program. The MS4 Solution allows the permittees to individually enter and manage their own MS4 data in a central database via the Internet and then summarize and format the data to support preparation of the annual report. The types of data managed by MS4 Solution include:

- Inspections of businesses and construction sites
- Illegal discharges and illicit connections
- Municipal maintenance records
- Public education/outreach events
- Staff training
- Water quality management plans
- Agency-specific policies, procedures and ordinances
- Management and subcommittee meetings
- Fiscal data

The MS4 Solution is currently mostly functional; most of the permittees are already using the database to manage the inspection program. Over the next two years, the MS4 Solution will become fully functional and more refined as the permittees gain experience using it.

9.2.2.2 Post-Construction BMPs

As a means to increase the efficiency of program implementation throughout the County, it is recommended that the Management Committee develop a post-construction BMP database that is associated with the MS4 Solution database. The primary purpose of the database would be to provide a means for tracking long-term responsibility and accountability for operating and maintaining BMPs throughout the area. In addition, the database could also be used to facilitate technology transfer by allowing construction engineers to search the base of installed alternatives for appropriate stormwater mitigation strategies. However, inclusion of a particular BMP in the database would not constitute a specific endorsement by the Co-Permittees of suitability for use in a different project. Responsibility for demonstrating the effectiveness of the selected BMP approach would remain solely with the project developer. Information that could be contained in the database includes identification of BMPs to address specific pollutants, effectiveness data for BMP types, construction costs, parties responsible for maintenance, and operating costs. Information would be developed based on actual experience in San Bernardino County and could also contain information from other regional or national BMP databases.

9.2.3 Information Sharing

The RWQCB or EPA may periodically conduct stormwater program audits. While these audits may identify program deficiencies, they also can highlight commendable program practices. When such practices are highlighted, they should be recognized as “Best Program Practices.” To benefit all permittees, during the next permit term a mechanism or methodology will be developed to facilitate tech-transfer so that, where desired, these practices can be easily incorporated into the local stormwater programs of the other permittees.

9.2.4 Annual Reporting

As required by the permit, by October 1 of each year the permittees are required to evaluate the MSWMP to determine the need for any revisions. The permittees will continue to submit this annual report to provide the opportunity to evaluate program progress and make recommendations for modifications to address changing program priorities, for example, as needed to comply with TMDL requirements. This reporting function will be aided to a large degree by continued implementation and refinement of the MS4 Solution.

In previous years, the content of the annual report included the following primary sections:

- *Introduction* – Provides an overview of the MS4 Permit program.
- *Program Administration* - Provides background information on how the area-wide program is organized and administered. It includes summaries of permittee participation and program budget and program expenditures.

- *Program Status* – This section is the heart of the report, providing summaries of outcomes from each program area, for example, inspections, control of illegal discharges and PIP activities.
- *Water Quality Monitoring Program* – Summarizes the results and analysis of the water quality monitoring effort.
- *Overall Program Effectiveness* – Evaluates progress in BMP implementation, water quality protection, and meeting program goals.
- *Program Activities for Next Reporting Year* – Identifies proposed goals and activities for the next permit year and outlines any proposed changes to the permit program.

While the permittees may retain this report structure during the next permit term, the permittees will consider making revisions to the structure to provide an alternative format and content that is better suited for reporting on water quality accomplishments, for example ongoing efforts to comply with TMDL implementation requirements.

9.2.5 Program Evaluation to Incorporate TMDL Requirements

During the next permit term, the permittees may need to revise the Stormwater Management Program to incorporate the findings from TMDL implementation activities. Modifications to the program may be reported as part of the annual report submittal, or, because of RWQCB requirements, may be provided as a separate program evaluation report.

Specific MSAR Bacterial Indicator TMDL requirements that will require the permittees to evaluate, and potentially revise, the stormwater program include:

- Based on the results of the Urban Source Evaluation Plan(USEP) or other studies conducted in the watershed, develop a plan and schedule to review and revise the MSWMP as necessary to incorporate measures to address the results of the USEP.
- Provide a proposal and schedule for (1) evaluating the effectiveness of BMPs and other control actions implemented and (2) evaluating compliance with the bacterial indicator waste load allocations for urban runoff.
- Based on the results of the USEP or other studies conducted in the watershed, develop a plan and schedule to review and revise the WQMP that addresses the bacterial indicator input from new developments and significant redevelopments.

As other TMDL implementation plans are established, additional requirements may be identified that require review and revision of the Stormwater Management Program.

9.3 Performance Commitments

The permittees propose to implement the following performance commitments to implement program evaluation program element:

- 9-1. The Management Committee will review and revise the MSWMP and WQMP requirements based on the findings of studies conducted as part of TMDL implementation. Revisions will be submitted to the RWQCB for approval.
- 9-2. The Management Committee will review the annual report structure and make changes as needed to be consistent with a TMDL implementation-focused program.
- 9-3. The Management Committee will refine the MS4 Solution database reporting system as needed to facilitate reporting on program status.
- 9-4. The Management Committee will evaluate its annual reporting approach and structure and, where appropriate, (a) reduce or eliminate reports or reporting elements that provide little or no information on water quality improvements; and (b) incorporate reporting elements that have an increased emphasis on water quality accomplishments, for example, pollutant investigations.
- 9-5. The Management Committee will develop a mechanism or methodology to facilitate sharing “Best Program Practices” so that the knowledge of practices that are particularly effective for reducing pollutants in the MS4 is shared.
- 9-6. As described in Section 9.2.2.2., the permittees will develop a post-construction BMP database to provide a means for tracking long-term responsibility and accountability for operating and maintaining BMPs.